

Amendments to the Claims:

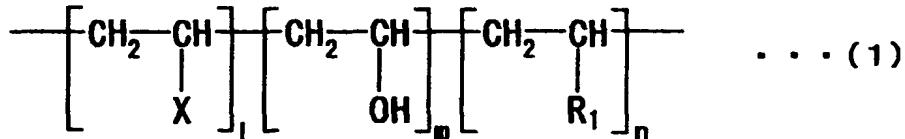
The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-18. (Canceled)

19. (Withdrawn) A color fading inhibitor, which is contained in a color-changing layer of a radiation exposure history indicator as a medium with a radiation absorbent and/or a radiation-excite fluorescent agent, a coloring organic electron donor compound and an active species-generating organic compound for making the organic electron donor compound colored by a radiation, comprising a polymer compound having a hydroxyl group and at least one group selected from a halogen group and an acetal group.

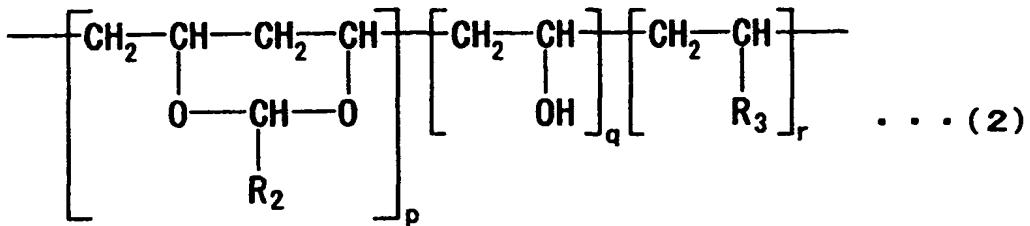
20. (Withdrawn-Currently Amended) The color fading inhibitor according to claim 19, wherein the polymer compound is at least one selected from

a polymer compound represented by the following chemical formula (1)



(in above formula, X wherein, in chemical formula (1), X is a halogen atom; R, R₁ is selected from the group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxy group; l, m and n are arbitrary ratios), ratios, and

a polymer compound represented by the following chemical formula (2)



(in above formula, R₂ and R₃ wherein, in chemical formula (2), R₂ and R₃ are the same or different, to each other, and are R₂ and R₃ are selected from a group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; and p, q and r are arbitrary ratios). ratios.

21. (Currently Amended) A composition for a radiation exposure history indicator comprising:

a medium consisting of 50 to 95 parts by weight of a solvent and 5 to 50 parts by weight of a polymer compound having a hydroxyl group and at least one group selected from a halogen group and an acetal group,

0.01 to 50 parts by weight of a coloring organic electron donor compound,

0.1 to 50 parts by weight of an active species-generating organic compound for making the organic electron donor compound colored by a radiation, and

0.1 to 500 parts by weight of a radiation absorbent and/or a radiation-excite fluorescent agent.

22. (Withdrawn) A radiation exposure history indicator sheet comprising a color-changing layer in a mingled state on at least a part of the surface of a base material sheet comprising:

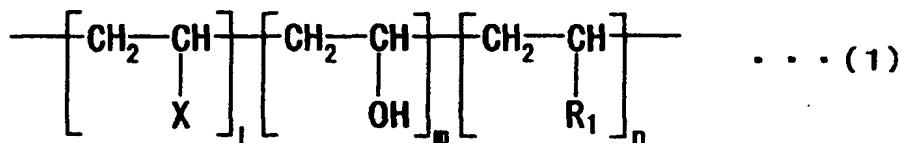
a coloring organic electron donor compound;

an active species-generating organic compound for making the organic electron donor compound colored by a radiation;

a color fading inhibitor comprising a polymer compound which inhibits color fading of the coloring by having a hydroxyl group and at least one group selected from a halogen group and an acetal group; and

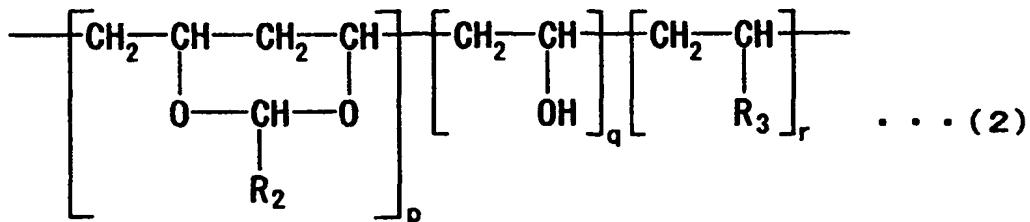
a radiation absorbent and/or a radiation-excite fluorescent agent.

23. (Withdrawn-Currently Amended) The radiation exposure history indicator sheet according to claim 22, wherein the polymer compound is at least one selected from a polymer compound represented by the following chemical formula (1)



(in above formula, wherein, in chemical formula (1), X is a halogen atom; R₁ is selected from the group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; l, and m and n are arbitrary ratios), ratios, and

a polymer compound represented by the following chemical formula (2)



~~(in above formula R_2 and R_3 wherein, in chemical formula (2), R_2 and R_3 are the same or different to each other, and R_2 and R_3 are selected from the group consisting of are a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; and p, q and r are arbitrary ratios) ratios.~~

24. (Withdrawn) The radiation exposure history indicator sheet according to claim 22, comprising dye on at least a part of the color-changing layer, whose color hue of the dye is similar to the color hue of the color-changing layer observed prior to or after changing the color.

25. (Withdrawn) The radiation exposure history indicator sheet according to claim 22, wherein the color-changing layer is covered with a transparent or translucent protective film layer.

26. (Withdrawn) The radiation exposure history indicator sheet according to claim 25, comprising dye on at least a part of either side of the protective film layer, whose color hue of the dye is similar to the color hue of the color-changing layer observed prior to or after changing the color.

27. (Withdrawn) The radiation exposure history indicator sheet according to claim 22, wherein the base material sheet is also a protective film sheet, and an adhesive layer is provided on the non-observation plane of the protective film sheet.

28. (Withdrawn) The radiation exposure history indicator sheet according to claim 27, comprising dye on at least a part of either side of the protective film layer, whose color hue of the dye is similar to the color hue of the color-changing layer observed prior to or after changing the color.

29. (Withdrawn) The radiation exposure history indicator sheet according to claim 28, wherein another base material sheet is adhered to the adhesive layer.

30. (Withdrawn) The radiation exposure history indicator sheet according to claim 22, wherein an adhesive layer is provided on the non-observation plane of the base material sheet.

31. (Withdrawn) A method of dosimetry of exposed dose comprising steps of: an exposed dose indicator containing a composition for a radiation exposure history indicator is attached to at least one of a exposing body selected from skin of a patient, a clothing for an operation, a hat for an operation, sheets for an operation for all over the surface thereof or with every regular intervals, and the exposing body is exposed; after exposure, the exposed dose is measured by comparing a coloring of the exposed dose indicator with a standard color that radiation dose which is equivalent to the exposed dose was irradiated to the same kind of indicators and the indicators were colored beforehand.

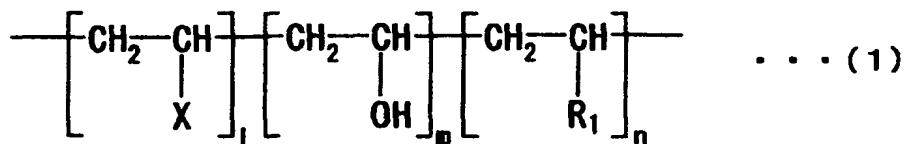
32. (Withdrawn) The method of dosimetry of exposed dose according to claim 31, wherein the composition for a radiation exposure history indicator comprises: a coloring organic electron donor compound; an active species-generating organic compound for making the organic electron donor compound colored corresponding to the exposed dose;

a color fading inhibitor comprising a polymer compound which inhibits color fading of the coloring by having a hydroxyl group and at least one group selected from a halogen group and an acetal group; and

a radiation absorbent and/or a radiation-excite fluorescent agent in a mingled state, or comprises at least one compound selected from a polyacetylene compound and diarylethene compound.

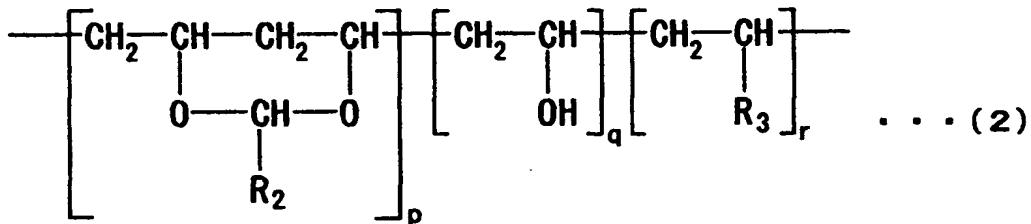
33. (Withdrawn-Currently Amended) The method of dosimetry of exposed dose according to claim 32, wherein the polymer compound is at least one selected from

a polymer compound represented by the following chemical formula (1)



(in above formula, wherein, in chemical formula (1), X is a halogen atom; R₁, R₁ is selected from the group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; l, m and n are arbitrary ratios), ratios, and

a polymer compound represented by the following chemical formula (2)



(in above formula, wherein, in chemical formula (2), R₂ and R₃, R₃ are the same or different to each other, and R₂ and R₃ are selected from a group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; and p, q and r are arbitrary ratios). ratios.

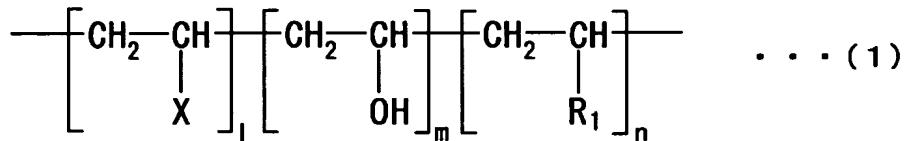
34. (Withdrawn) The method of dosimetry of exposed dose according to claim 32, wherein the exposing body is exposed every time the radiation is irradiated, and then a cumulative total amount of exposed dose is calculated.

35. (Withdrawn) The method of dosimetry of exposed dose according to claim 32, wherein the colors are compared by comparing measured values of a color difference measurement, a concentration reflection measurement, an absorbance measurement, a transmittance measurement, or by visual observation.

36. (Withdrawn) The method of dosimetry of exposed dose according to claim 32, wherein the exposed dose indicator is a paint comprising the composition, a label having the composition, a sheet having the composition, or a molding having the composition.

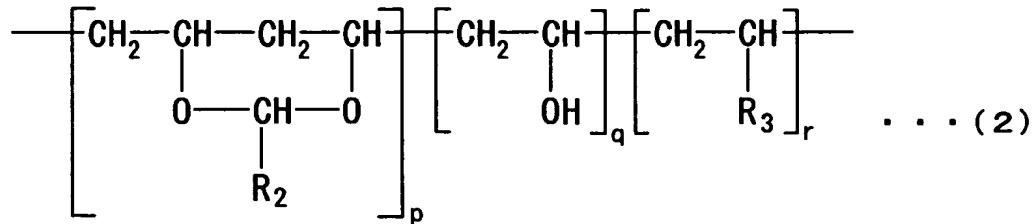
37. (Withdrawn) The method of dosimetry of exposed dose according to claim 32, wherein the coloring is a change of a color hue, or a change of a contrast of a color hue.

38. (New) The composition for a radiation exposure history indicator according to claim 21, wherein the polymer compound is at least one selected from a polymer compound represented by the following chemical formula (1)



wherein, in chemical formula (1), X is a halogen atom; R₁ is selected from the group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxycarbonyl group, a fatty carboxyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; and l, m and n are ratios; and

a polymer compound represented by the following chemical formula (2)



wherein, in chemical formula (2), R₂ and R₃ are same or different and R₂ and R³ are selecting from the group consisting of a hydrogen atom, a cyano group, an alkyl group, an aryl group, an alkoxy group, an alkoxy carbonyl group, a fatty carbonyloxy group, a carboxyl group, an aryloxy group, an aralkyl group, an aralkoxyl group; and p, q and r are ratios.